UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,676	02/01/2001	January Kister	PRO-128	3474

7590 11/06/2002

MAREK ALBOSZTA
LUMEN INTELLECTUAL PROPERTY SERVICES
45 CABOT AVENUE, SUITE 110
SANTA CLARA, CA 95051

EXAMINER
TERESINSKI, JOHN

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/775,676	KISTER ET AL.
	Examiner	Art Unit
	John Teresinski	2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,2 and 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,218,848 to Hembree et al. in view of U.S. Patent No. 6,051,982 to Alcoe et al..

Regarding claim 1, Hembree et al. discloses a probe apparatus for testing a circuit chip (column 2 lines 35-40) comprising a probe group having two or more probes (column 2 lines 62-64) for independently conductively contacting a single terminal of the chip (column 5 lines 30-39). Hembree et al. does not disclose a guiding boundary for the probe group. Alcoe et al. discloses a probe apparatus for testing a circuit chip (column 2 lines 35-40) comprising a guiding boundary for a probe group having two or more probes (Fig. 1 element # 17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a guiding boundary for a probe group as taught by Alcoe et al. into Hembree et al. for the purpose of aligning a probe group with a single contact terminal.

Regarding claim 2, Hembree et al. discloses a resistivity measuring circuit that evaluates path resistance of contacts (column 2 lines 53-56) and adjusts test signal voltages accordingly (column 3 lines 6-7). Regarding claim 5, Hembree et al. discloses the utilization of buckle beam probes included in probe cards for testing (column 1 line 44).

Regarding claims 6-8, Hambree et al. does not teach a bundled probe group in a single perforation of a sheath, a single perforation that is a long hole, or a single perforation in the shape of a circular hole. Alcoe et al. teaches bundled probes in a single perforation (figure 1), a long hole (figure 23) and a circular opening (column 6 lines 16 & 35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a perforation for the bundled probes, a long hole perforation or a circular opening perforation as taught by Alcoe et al. into Hembree et al. for the purpose of providing a means for slideable engagement of a probe during contact (column 6 lines 14-23).

Regarding claims 9-11, Hembree et al. discloses a means for aligning the test site and the tips of the probe contacts included in the testing device (column3 lines 23-26), an embodiment of the probe contacts with essentially spherical shape (column 7 line 11 & Figure 5A) and a test method that includes placing the probe card contacts in communication with the test site, evaluating the contact resistances and compensating test signals in accordance with path resistance (column 8 lines 48-54, 56-59).

Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,218,848 to Hembree et al. and U.S. Patent No. 6,051,982 to Alcoe et al. as applied to claims 1,2, and 11 above, and further in view of U.S.Patent No. 5,136,252 to Witt..

Regarding claims 3 and 12, Hembree et al. teaches the use of four contacts to measure path resistances of contacts and circuitry capable of compensating voltage drop (column 2 lines 54-56, 62-64). Hembree et al. does not teach the use of three contact probes. Witt teaches, only three probes are necessary instead of four in the evaluation of resistive bodies (column 11 line

64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of three probes as taught by Witt into Hembree et al. for the purpose of obtaining a resultant signal that is more sensitive than could be obtained by the four probe technique (column 3 lines 5-16).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,218,848 to Hembree et al. and U.S. Patent No. 6,051,982 to Alcoe et al. as applied to claims 1 and 2 above, and further in view of U.S.Patent No. 6,218,846 to Ludwig et al..

Regarding claim4, Hembree et al. teaches the use of four contacts in measuring the resistivity of contacts and electrical circuitry for adjusting input signals due to the measured resistance (column 2 lines 54-56, column 3 line 7). Hembree does not teach the 4 Wire Ohm's Measurement technique. Ludwig et al. teaches resistance measurement using a four point technique according to Ohm's Law (column 1 lines 46-50, 55-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a four point Ohm's technique measurement taught by Ludwig into Hembree et al. for the purpose of measuring contact resistance of non-uniform contact points (column 1 lines 60-65).

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to methods and devices for bundled probe apparatuses in general:

U.S. Patent No. 6,404,213 to Noda discloses a probe group for contacting a single terminal.

U.S. Patent No. 6,400,168 to Matsunaga et al. discloses a probe tip for devices under test.

U.S. Patent No. 5,565788 to Bur et al. discloses a shielded multiple conductor probe tip.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (703) 305-4746. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872 9319 for regular communications and (703) 872 9318 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JT
October 31, 2002

Christine K. Oda
Christine Oda
Primary Examiner